

P-IEE-102/WO

**PATENT CLAIMS**

1.     Seat occupancy sensor with at least two switch elements actuatable by pressure which can be allocated to a surface of a seat with a certain distance between them in such a way that a first switch element is allocated to a first area of the seat and a second switch element is allocated to a second area of the seat, characterized in that the first and second switch elements are connected together in such a way as to implement a logical AND gate.
2.     Seat occupancy sensor according to Claim 1, wherein the first and second switch elements are connected in series.
3.     Seat occupancy sensor according to either of Claims 1 or 2, wherein the first and/or second switch element comprises a pressure sensor.
4.     Seat occupancy sensor according to any one of Claims 1 to 3, wherein the first and/or second switch element comprises a plurality of individual switching cells connected together in such a way as to implement a logical OR gate.
5.     Seat occupancy sensor according to Claim 4, wherein the individual switching cells of a switch element are connected in parallel.
6.     Seat occupancy sensor according to either of Claims 4 or 5, wherein a switching cell comprises a pressure sensor.
7.     Seat occupancy sensor according to either of Claims 3 or 6, wherein the pressure sensor presents a foil-type pressure sensor in through-mode.

8.     Seat occupancy sensor according to either of Claims 3 or 6, wherein the pressure sensor presents a foil-type pressure sensor in shunt mode.
- 5     9.     Seat occupancy sensor according to any one of Claims 1 to 8, wherein the first and second switch elements are arranged at least approximately at equal distances from a seat centreline running longitudinally with respect to the vehicle and at a certain distance from each other.
- 10    10.    Seat occupancy sensor according to any one of Claims 1 to 9, wherein the first and second switch elements are arranged essentially symmetrically with respect to a seat centreline running longitudinally with respect to the vehicle and at a predetermined distance from each other.